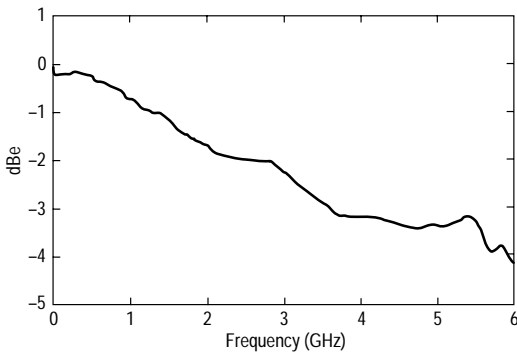
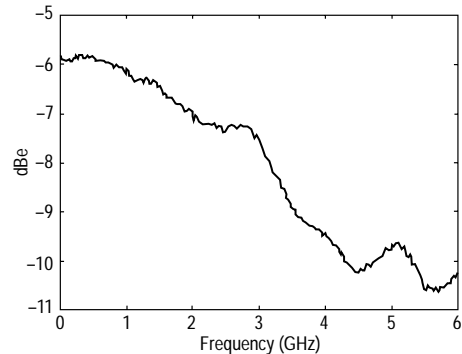


Lightwave Source Performance Summary

Specifications and <i>Characteristics</i> (in italics)	Agilent 83402C	Agilent 83403C
Center wavelength ^{8,9}	1310 ±30 nm	1550 ±30 nm
Center wavelength stability ⁹	0.3% per year	0.3% per year
Spectral Width ^{8,9}	<50 MHz	<50 MHz
Average optical output power ^{8,9}	2000–3000 μW	2000–3000 μW
Optical port return loss	≥35.0 dBo	≥35.0 dBo
Modulation range	300 kHz to 6 GHz	300 kHz to 6 GHz
RF input power (max)	+11 dBm	+11 dBm
DC into RF port (max)	20 V	20 V
Electrical port return loss ¹⁰	≥11 dB	≥11 dB
Modulation frequency response (300 kHz to 6 GHz) ⁸		
Corrected (disk) (specification)	±0.5 dBe	±0.5 dBe
Corrected (disk)	±0.31 dBe	±0.31 dBe
Corrected (polynomial)	±1.5 dBe	±1.5 dBe
Uncorrected	±0.2/–4.8 dBe	+0.2/–4.8 dBe
Responsivity at 140 MHz modulation frequency	0.053 W/A (–25.5 dBe)	0.053 W/A (–25.5 dBe)
Modulation (harmonic) distortion ¹¹		
300 kHz to 1 GHz	25.0 dBc	25.0 dBc
1 GHz to 3 GHz	(footnote 12)	(footnote 12)
1 GHz to 6 GHz	8.0 dBc	8.0 dBc
Third order intercept (min) ¹¹	23 dBm	23 dBm
1 dB modulation compression level at 50 MHz	—	—
Equivalent Input Noise		
0.01 to 5 GHz	–124 dBm/Hz	–124 dBm/Hz
5 to 6 GHz	–119 dBm/Hz	–119 dBm/Hz
Reflection Sensitivity (300 kHz to 6 GHz) ¹³	±0.04 dBe	±0.04 dBe
Laser Type	DFB	DFB
Laser Class	FDA Class I and IEC Class IIIB	FDA Class I and IEC Class IIIB
Optical Fiber	9/125 μm	9/125 μm



Agilent 83402C modulation frequency response (characteristic)



Agilent 83403C modulation frequency response (characteristic)

⁸ Factory test system

⁹ No intensity modulation applied.

¹⁰ Measured on 8703 from 130 MHz to 6 GHz.

¹¹ Measured with +10 dBm RF input power 0.01 to 6 GHz.

¹² Changes linearly from 25 dBc at 1 GHz to 8 dBc at 3 GHz.

¹³ To a Fresnel reflection using a 9:1 optical coupler, averaging factor = 16

